



FY19 guidance metrics on track, Odysseus Project early works progressing on time and budget

December Quarter 2018 Highlights:

- Zero lost time injuries, resulting in a LTIFR of 1.80
- Mine production of 5,851 nickel tonnes and 11,719 nickel tonnes for the half year
- Mill production 5,415 nickel tonnes and 10,794 nickel tonnes for the half year
- Unit cash cost of nickel in concentrate of A\$3.15/lb and A\$3.07 for the half year, well within guidance
- Operating cash flow of A\$18.2m and closing cash at bank of A\$134.3m
- Final fully franked FY18 dividend of A\$5.5M paid (2 cents per share)
- Mill Recovery Enhancement Project (MREP) in ramp up mode with spot product sales initiated prior to full tender
- Substantial progress on Odysseus early works and post feasibility study (DFS) activities.

Western Areas Managing Director, Mr Dan Lougher, said the Company continued to deliver consistent operational performance in line with expectation for the first half.

“Pleasingly the quarter saw an increase in both nickel production into concentrate and nickel tonnes delivered into the Company’s offtake contracts”

“The Odysseus project is entering the exciting development phase, with the project commencing underground activities and optimisation work for additional production volumes from AM5 and AM6 continuing.”



Western Areas (“WSA” or the “Company”) (ASX: WSA) is pleased to report solid progress across the Company’s various activities during the December quarter, including consistent quarterly production results, where all operational metrics for the half year are on track to meet full year guidance.

The Odysseus project continues to advance on time and budget with completion of the surface infrastructure component of the early works package, haulage shaft infrastructure secured and preparations finalised for the commencement of the decline rehabilitation.

Average mined grade across the Forresteria operation improved quarter on quarter, resulting in less ore tonnes required to be mined, while maintaining consistent production at 5,851 nickel tonnes in ore. The Cosmic Boy Concentrator throughput was in line with plan, delivering its highest quarterly concentrate production in twelve months at 5,415 nickel tonnes.

The Company announced a decision to mine the Odysseus project at Cosmos following the release of strong DFS results during the quarter. The surface infrastructure component of the ongoing early works program was completed, with the project moving into the underground rehabilitation phase. Evaluation of the upside opportunities at Odysseus has commenced, including a mining optimisation assessment for additional production from the AM5 and AM6 deposits, which contain 57.6kt of nickel classified in the Indicated Mineral Resource category that were not included in the DFS.

The MREP is continuing to ramp-up and is consistently producing product in line with design specification. During the quarter several bulk container shipments of MREP product were delivered to multiple customers via spot market contracts. The Company continues to see strong demand from numerous parties for both the new MREP product and for conventional concentrate. The current offtake contracts for conventional concentrates are due for renewal in early 2020.

The first half nickel price has been volatile due to geo-political factors that have exerted downward pressure on global markets including base metals. However, the current fundamental outlook for nickel appears strong, with the LME nickel stockpile falling towards 200kt during January, the lowest level in over five years, demonstrating that demand continues to outstrip supply. Encouragingly, the nickel price has started the new calendar year on a positive trend, with stainless steel consumption remaining healthy and the outlook for nickel-intensive EV battery demand remaining promising.



Production Overview

Item	Unit	FY18		FY19		FY19 YTD Total
		Mar Qtr	Jun Qtr	Sep Qtr	Dec Qtr	
Total Ore Mined	tonnes	163,479	160,714	141,567	139,528	281,095
Mine Grade	Ni %	3.8%	4.0%	4.1%	4.2%	4.2%
Total Nickel Mined	tonnes	6,236	6,381	5,868	5,851	11,719
Ore Processed (Milling/Concentrator)	tonnes	148,083	152,425	156,706	154,517	311,223
Processed Grade	Ni %	3.9%	4.0%	3.9%	4.0%	3.9%
Average Processing Recovery	%	86%	89%	89%	88%	89%
Total Nickel in Concentrate	tonnes	4,827	5,368	5,379	5,415	10,794
Total Nickel Sold	tonnes	4,750	5,176	5,018	5,386	10,404
Contained Nickel in Stockpiles	tonnes	4,311	4,755	4,820	4,413	
Cash Cost Nickel in Concentrate	A\$/lb	2.71	2.80	2.99	3.15	3.07
Cash Cost Nickel in Concentrate	US\$/lb	2.13	2.12	2.19	2.26	2.22
Exchange Rate	US\$/A\$	0.79	0.76	0.73	0.72	0.72
Net Nickel Price (before payability applied)	A\$/lb	7.80	8.71	7.91	6.89	7.39

Western Areas has Australia's highest grade nickel mines and is a low unit cash cost producer. Its main asset, the 100% owned Forrestania Nickel Project, is located 400km east of Perth in Western Australia. Western Areas is also Australia's second largest sulphide nickel miner producing approximately 22,000 to 25,000 nickel tonnes in ore per annum from its Flying Fox and Spotted Quoll mines - two of the lowest cost and highest grade nickel operations in the world.

An active nickel project developer at Cosmos and explorer at Western Gawler in Australia, the Company also holds exploration interests in Canada through shareholdings in Grid Metals (formerly Mustang Minerals). Additionally, the Company has exposure to the emerging lithium market via its shareholding in Kidman Resources Limited.

The Board remains focused on the core business of low cost, long life nickel production, new nickel discoveries and generating returns to shareholders. It has put in place the cost structure and capabilities to prosper throughout the cycle by adopting prudent capital management and an opportunistic approach. Its latest presentation can be found at <http://www.westernareas.com.au/investor-centre/corporate-presentations.html>.

For further details, please contact:

Dan Lougher
 Managing Director & CEO, Western Areas Ltd
 Telephone +61 8 9334 7777
 Email: dlougher@westernareas.com.au

Joseph Belladonna
 Chief Financial Officer, Western Areas Ltd
 Telephone +61 8 9334 7777
 Email: jbelladonna@westernareas.com.au

Shane Murphy
 FTI Consulting
 Telephone +61 8 9485 8888 / 0420 945 291
 Email: shane.murphy@fticonsulting.com



Corporate and financing

Cashflow

Operational cashflow for the quarter totalled A\$18.2m (September quarter A\$24.8). Absolute operating costs remained in line with the prior quarter, however revenue was lower due to the lower average (pre-payable deduction) nickel price for the quarter of A\$6.89/lb (September quarter A\$7.91/lb) and negative quotation period price adjustments being settled during the quarter.

As expected, capital and mine development expenditure at Forrestania fell to A\$8.1m (September quarter A\$15.8m) following completion of the ventilation system at Spotted Quoll and a return to a more managed mine development programme. In line with the updated guidance, growth expenditure for the Odysseus project at Cosmos increased to A\$18.7m, which includes the ongoing early works package, final DFS costs, and acquisition of the Schlumberger pump and shaft hoisting infrastructure. Exploration expenditure for the quarter was A\$2.6m.

Cash at bank at quarter end was A\$134.3m (September quarter A\$150.9m), while cash at bank plus nickel sales receivables totalled A\$143.8m (September quarter A\$164.3m). The significant items during the quarter included:

- Payment of a A\$5.5m final dividend relating to FY18;
- Odysseus mine development and DFS expenditure of A\$18.7m; and
- Quotation period adjustment repayments of A\$2.9m.

Dividend

The two cent per share fully franked dividend related to the FY18 financial results was paid to shareholders during October 2018.

Hedging

When pricing is supportive, the Company manages nickel price and foreign exchange risk with a combination of short term quotation period (QP) hedging and a set limit of medium term hedging. The policy allows the use of forward sales, bought options and collar style options:

- QP hedging is used to manage the risk of price fluctuations for nickel already shipped to offtake partners, where the nickel price is yet to be finalised; and
- Medium-term hedging is used to manage the risk of nickel price fluctuations, with a maximum 25% of expected nickel sales per month hedged out for a period of 12 to 18 months.

Details of hedging in place at quarter end are as follows:

Hedging Details - FY19	
US\$ Hedging - Collar Options	
US\$ Hedged	30,000,000
Average Put	US\$0.6831
Average Call	US\$0.7325

Kidman Resources Limited (Kidman)

The Company owns 17.4m shares in Kidman with a market value of A\$19.0m, based on a closing 31 December share price of A\$1.09/share.

Guidance

As is normal practice, the Company will provide any adjustments to FY19 Guidance in conjunction with release of the half year statutory results.



Mine safety and environment

Safety

There was no Lost Time Injury (LTI) recorded during the quarter. The LTI Frequency Rate remained steady at 1.80 but the Total Recordable Injury Frequency Rate reduced from 9.9 to 8.1 at quarter end.

Key safety management initiatives included a comprehensive Health and Hygiene Risk Based Management Assessment. The findings of the assessment will be used to update the existing Health and Hygiene Management Plan. A site wide Noise Audit was also conducted during the quarter to assist in noise management plans.

Emergency Response Team (ERT) training focused on wildfire, rope rescue and rescue skills assessments, with a number of evacuation drills and mock emergency drills conducted. In mid-December the ERT responded to a small bushfire north of the Forrestania operations initiated by sparks from faulty electrical infrastructure. The ERT also responded to an incident where a prime-mover tipped onto its side at the historic tailings dam, with no injury being sustained.



ERT fire-fighting training exercise



ERT rope rescue training exercise at SQ open-pit

Environment

Forrestania (FNO)

No reportable environmental incidents were recorded during the quarter.

The environmental team completed all required compliance monitoring and reporting, plus New Morning Daybreak (NMDB) environmental surveys, including groundwater, flora, fauna, stygofauna, troglofauna and waste characterisation.

A highlight of the quarter was the rehabilitation of a Tree Martin nestling that was found near the Flying Fox mine offices. Due to the timely response of site personnel the nestling was recovered and cared for onsite, before being transferred to the Kanyana Wildlife Rehabilitation Centre in Perth for further care and then successfully released back into its home environment at Forrestania.



Rescued Tree Martin nestling



Recovered Tree Martin nestling prior to release

ACTIVITY REPORT

For the period ending 31 December 2018

WESTERN AREAS LTD



Cosmos

No reportable environmental incidents were recorded and all compliance monitoring and reporting was completed.

The construction of WMP 8 and 9 was completed during the quarter, with the required engineering reports prepared and submitted to the regulator. The Department of Water Environment Regulation (DWER) amended the Cosmos environmental license to include WMP 8 and WMP 9.

An Aboriginal heritage survey was completed with the Tjiwarl Aboriginal Corporation over the location of a new waste rock dump for life of mine requirements.



Heritage survey with Tjiwarl and WSA participants

Mine and mill production statistics and cash costs

TONNES MINED		FY18		FY19		YTD Total
		Mar Qtr	Jun Qtr	Sep Qtr	Dec Qtr	
Flying Fox						
Ore Mined	tonnes	66,858	67,236	58,699	59,309	118,008
Grade	Ni%	3.7%	3.9%	4.0%	4.3%	4.2%
Flying Fox Nickel Mined	tonnes	2,466	2,625	2,330	2,574	4,904
Spotted Quoll						
Ore Mined	tonnes	96,621	93,478	82,868	80,219	163,087
Grade	Ni%	3.9%	4.0%	4.3%	4.1%	4.2%
Spotted Quoll Nickel Mined	tonnes	3,770	3,756	3,538	3,277	6,815
Total Ore Mined	tonnes	163,479	160,714	141,567	139,528	281,095
Grade	Ni%	3.8%	4.0%	4.1%	4.2%	4.2%
Total Nickel Mined	tonnes	6,236	6,381	5,868	5,851	11,719



Flying Fox

Mine Production

Production was **59,309 tonnes of ore at an average grade of 4.3% nickel for 2,574 nickel tonnes**. Ore production was predominately (83%) derived from long-hole stoping (LHS), flat-back stoping (4%) at the 460 level and ore drive development (13%).

LHS production was sourced solely from the T5 area, namely from the 425, 410 (4.7kt @ 4.4% Ni), 385 (3.9kt @ 5.1% Ni), 345 (14.6kt @ 5.0% Ni), 295 (3.6kt @ 5.0%), 245, 230 and 215 stopes.

Associated paste-filling of stope voids resulted in 21,832m³ of paste poured.

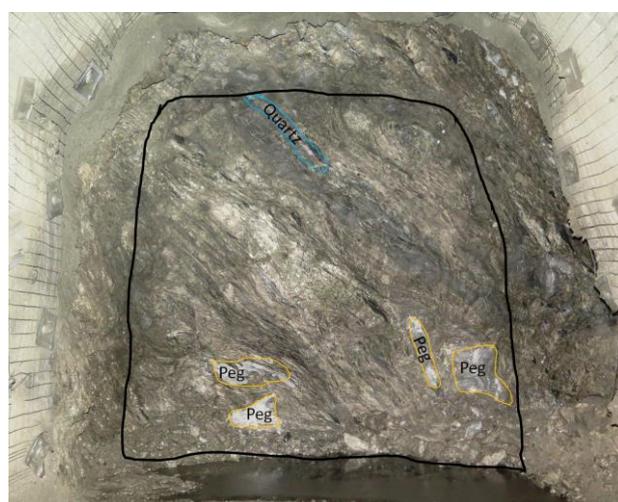
Mine Development

There was 219m of twin boom jumbo capital incline development at the 1170 level and 1150 levels to access the old Flying Fox orebody.

The lower parts of the mine completed 387m of single-boom jumbo development which involved:

- 52m of lateral capital development at the 370 access;
- 67m of operating waste development at the 385, 210 and 160 levels;
- 116m in paste-fill (between the 460 and 215 levels) to facilitate slot drilling; and
- 152m of ore drive development at the 385, 210, and 160 levels.

There was no capital infrastructure undertaken during the quarter.



385 SOD ore drive with a face grade of 7.3% Ni

Spotted Quoll

Mine Production

Spotted Quoll production was **80,219 tonnes of ore at an average grade of 4.1% nickel for 3,277 nickel tonnes**. Ore production was sourced predominately from LHS (59%) with the remainder (41%) from ore drive development.

The 'twin-boom area' (TBA) completed production in the 1215 and 932 levels, with ongoing production from the 660 and 627 levels and commencement of stoping on the 610 level.

The 'single-boom area' (SBA) had ongoing production from the 920, 862, 852, 825, 842, 832, 819 and 804 levels, and commencement of the 818 level mid-quarter.

Mine Development

Total jumbo development for the quarter was 1,046m, which included 222m of capital decline development. During the quarter, 400m of lateral capital development and 227m of operating waste development occurred, which included 84m of paste-fill development to facilitate slot drilling.

The 'Stage 2' 580 and 565 ore drive levels were established from the 570 level off the main decline, with 278m ore drive development completed between 610 and 565 levels by quarter end.

A total of 196m of SBA ore drive development was completed between the 795 and 747 levels, including 104m past the ore reserve boundary (5.4kt at 4.9% Ni).

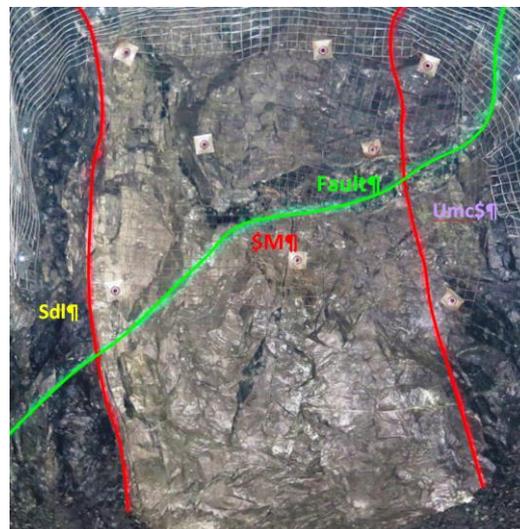


Infrastructure

At the Spotted Quoll “Stage 2” zone, a remote stench gas activation unit was installed allowing the emergency stench gas system to be activated from a remote location on the surface and the underground air compressor and air receiver was installed to supply underground compressed air to the enlarged Stage 2 mining activities.



SBA 747 ore drive (3.5m W x 3.5m H) with a face grade of 7.3% Ni



TBA Stage 2, 610 ore drive (4.5m W x 4.5m H) with a face grade of 5.1% Ni

Cosmic Boy Nickel Concentrator

TONNES MILLED AND SOLD		FY18		FY19		YTD Total
		Mar Qtr	Jun Qtr	Sep Qtr	Dec Qtr	
Ore Processed – Mined Ore	tonnes	144,925	152,425	156,706	154,517	311,223
Ore Sorter & Low Grade Stockpile	tonnes	3,158	0	-	-	-
Total Ore Milled	tonnes	148,083	152,425	156,706	154,517	311,223
Grade	%	3.9%	4.0%	3.9%	4.0%	3.9%
Ave. Recovery	%	86%	89%	89%	88%	89%
Nickel in Concentrate Produced (i)	tonnes	4,827	5,368	5,379	5,415	10,794
Nickel in Concentrate Sold	tonnes	4,750	5,176	5,018	5,386	10,404

(i) Includes MREP Nickel tonnes produced.

The Cosmic Boy Concentrator processed 154,517 tonnes of ore at an average grade of 4.0% nickel for a total of 36,266 tonnes of concentrate grading 14.8% nickel. This resulted in 5,415 nickel tonnes produced at a metallurgical recovery of 88% with average concentrator availability of 99%. Concentrator nickel recovery was impacted by sub-optimal grinding performance that occurred following a mill reline in October, with performance improving by quarter’s end.

For the half year, the Concentrator processed 311,223 tonnes of ore grading 3.9% nickel for a total of 71,794 tonnes of concentrate grading 14.9% nickel.

A total of 36,683 tonnes of concentrate was delivered, containing 5,386 nickel tonnes, for the quarter. A total of 70,773 tonnes of concentrate was delivered into offtake contracts, containing 10,404 nickel tonnes, for the half year.

Other sales unit costs for the quarter were royalties at A\$0.22/lb and concentrate transport of A\$0.40/lb of nickel in concentrate. The concentrate transportation rate was impacted due to weather-related road maintenance costs incurred during the quarter.

ACTIVITY REPORT

For the period ending 31 December 2018

WESTERN AREAS LTD



Stockpiles

Ore stockpiles at the end of the quarter totalled **101,455 tonnes of ore at 3.7% nickel for 3,773 nickel tonnes** representing more than two months of mill feed, thereby enabling the selection of an optimal mill feed blend.

The concentrate stockpile at quarter end was 4,093 tonnes at an average grade of 15.6% nickel, containing 640 nickel tonnes. This included 90 containers at Esperance ready for the January shipment.

STOCKPILES		FY18		FY19	
		Mar Qtr	Jun Qtr	Sep Qtr	Dec 2018
Ore	tonnes	127,504	135,793	118,549	101,455
Grade	%	3.1%	3.2%	3.5%	3.7%
Concentrate	tonnes	2,426	2,972	4,462	4,093
Grade	%	14.7%	15.1%	15.4%	15.6%
Contained Nickel in Stockpiles	tonnes	4,311	4,755	4,820	4,413

Cash Costs

FINANCIAL STATISTICS		FY18		FY19		YTD
		Mar Qtr	Jun Qtr	Sep Qtr	Dec Qtr	
Group Production Cost/lb						
Mining Cost (*)	A\$/lb	1.89	2.03	2.24	2.38	2.31
Haulage	A\$/lb	0.07	0.07	0.07	0.07	0.07
Milling	A\$/lb	0.57	0.52	0.49	0.51	0.50
Admin	A\$/lb	0.21	0.21	0.22	0.22	0.22
By Product Credits	A\$/lb	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Cash Cost Ni in Con (***)	A\$/lb	2.71	2.80	2.99	3.15	3.07
Cash Cost Ni in Con (***)	US\$/lb(**)	2.13	2.12	2.19	2.26	2.22
Exchange Rate US\$ / A\$		0.79	0.76	0.73	0.72	0.72

(*) Mining Costs are net of deferred waste costs and inventory stockpile movements.

(**) US\$ FX for Relevant Quarter is RBA average daily rate (Dec Qtr = A\$1:US\$0.72)

(***) Payable terms are not disclosed due to confidentiality conditions of the offtake agreements. Cash costs exclude royalties and concentrate logistics costs.

Note: Grade and recovery estimates are subject to change until the final assay data are received.

The unit cash cost of production of nickel in concentrate (excluding smelting/refining charges, concentrate logistics and royalties) was A\$3.15/lb (US\$2.26/lb) and A\$3.07/lb for the half year which is within the full year guidance range of A\$2.80/lb to A\$3.20/lb. The quarter on quarter increase in mining cost per pound is primarily due to a higher proportion of development drive ore production, costs of a one-off ground support refurbishment at Flying Fox, lower average recovery and rise and fall (R&F) charges on mining contracts. It is noted that should the current R&F indices be maintained, R&F charges are expected to reduce in the future.



Forrestania Mineral Resources and Ore Reserves

A full summary of the Company's Mineral Resource and Ore Reserve estimates is included at the end of this report.

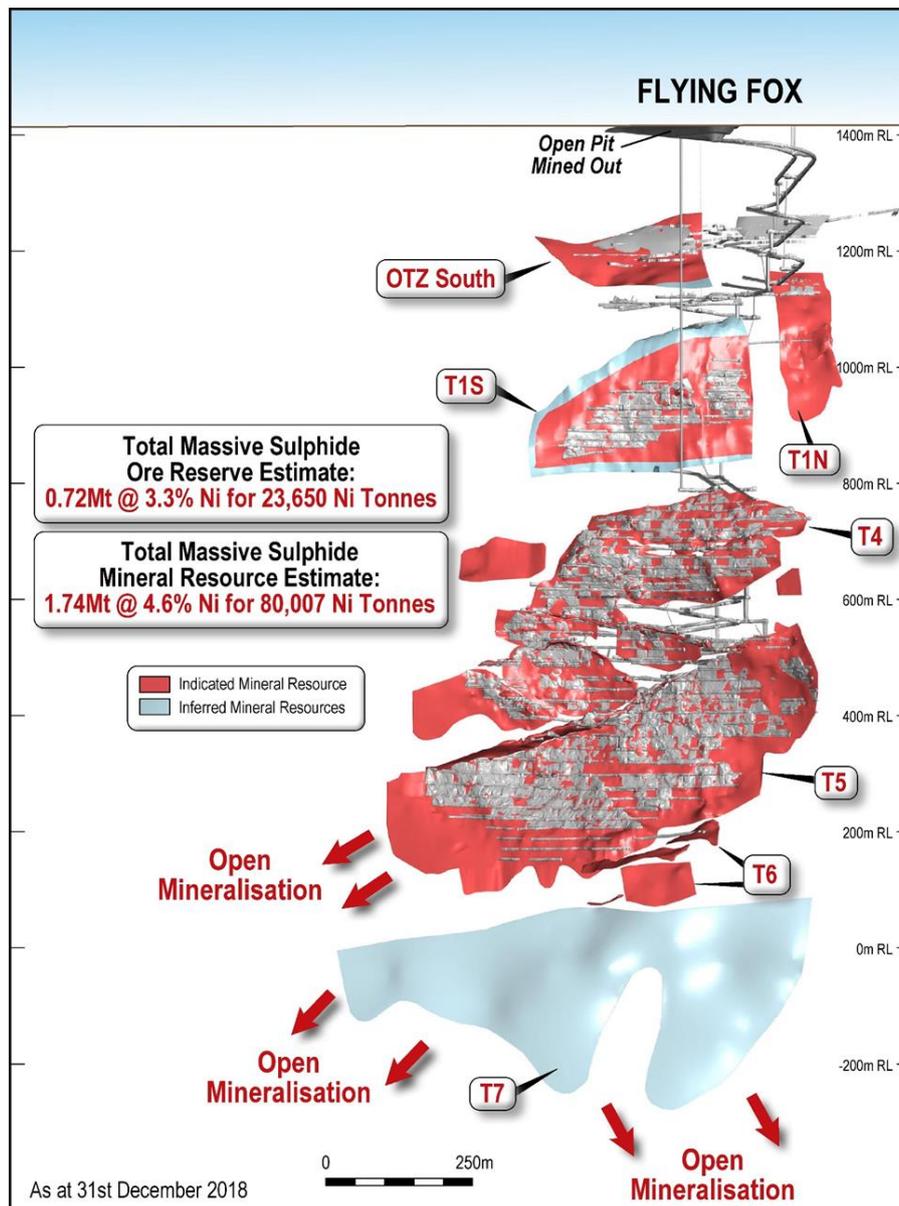
Flying Fox

No Resource extension drilling took place during the quarter.

The technical and economic review of the lower grade ores at Flying Fox mine (including the T5/Lounge Lizard hanging-wall disseminated zone) continued during the quarter with completion expected in January. This review will assess the suitability of the lower grade ores to heap leaching utilising the Company's BioHeap™ technology, which has the potential to extend the operating life of Flying Fox. As per the Company's Ore Reserve and Mineral Resource Statement there is an Indicated Mineral Resource in these disseminated zones of 4.6Mt at a grade of 0.8% Ni for 36,590 nickel tonnes.

The Flying Fox **Massive Sulphide Mineral Resource**, including depletion to the end of December 2018, stands at **1.74Mt of ore at a grade of 4.6% Ni for 80,007 nickel tonnes**.

The Flying Fox **Massive Sulphide Ore Reserve**, including depletion to the end of December 2018, stands at **0.72Mt of ore at a grade of 3.3% Ni for 23,650 nickel tonnes**.





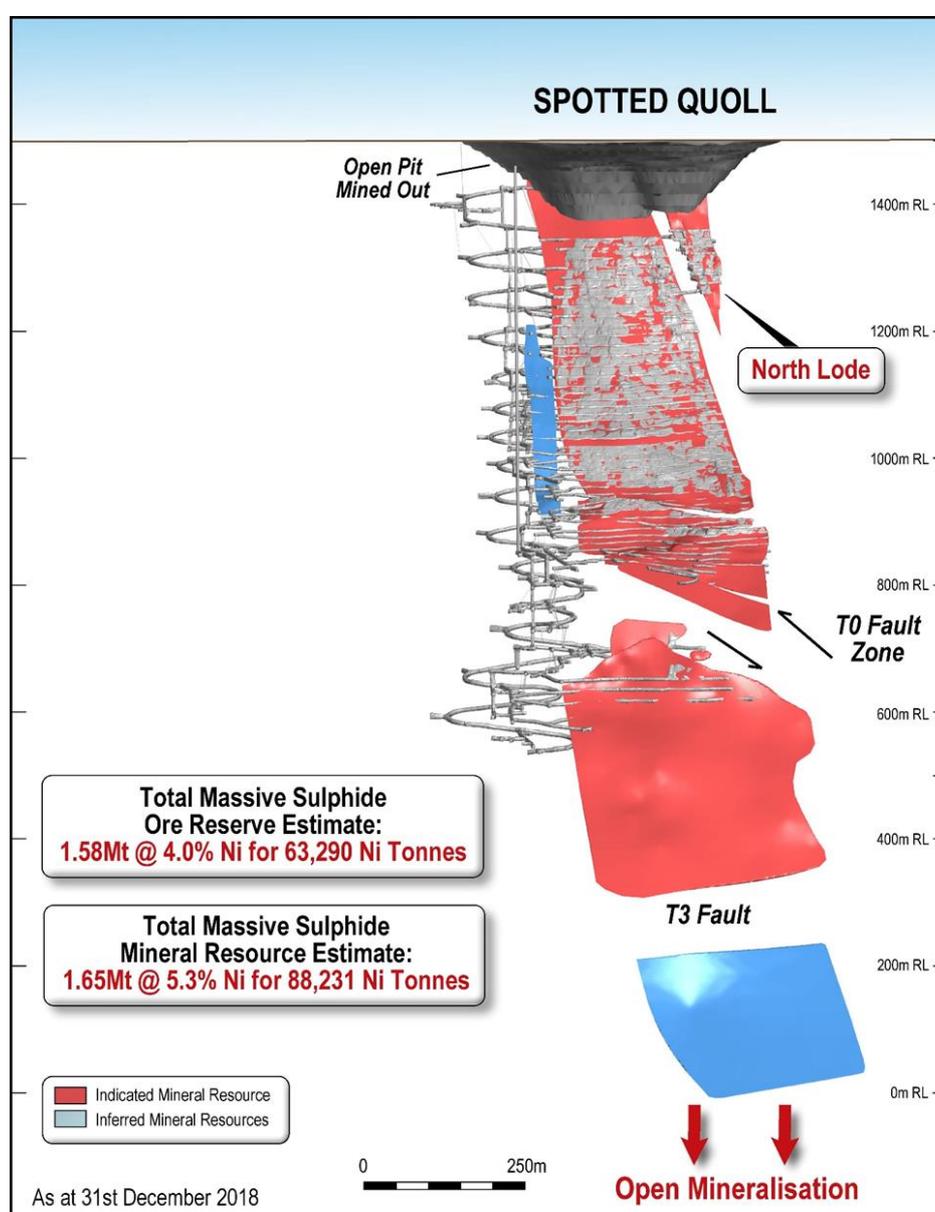
Spotted Quoll

A surface diamond drilling program designed to test Stage 3 (below the T3 fault) mineralisation commenced in mid-September and is ongoing at quarter end. The program involves a staged approach with an initial parent drill-hole (1,288m) followed by a number of wedge drill-holes. Results from the drill program are expected to be reported in the March report.

No additional resource extension or resource definition drilling took place during the quarter.

The Spotted Quoll **Mineral Resource**, including depletion to the end of December 2018, stands at **1.65Mt of ore at a grade of 5.3% Ni for 88,231 nickel tonnes**.

The Spotted Quoll **Ore Reserve**, including depletion to the end of December 2018, stands at **1.58Mt of ore at a grade of 4.0% Ni for 63,290 nickel tonnes**.





Growth Projects

Odysseus (or the “Project”) early capital works and post DFS activities

An ASX release was issued by the Company on the 9th January 2019, giving an update on the early works program and the post DFS activities, with several key recent milestones achieved including;

- The Schlumberger submersible pump installation to accelerate dewatering;
- Decline rehabilitation mining contract awarded to Barmenco Ltd with mobilisation in January 2019;
- Construction of all surface water management ponds and high voltage electrical reticulation complete and operational;
- Existing 520 person camp upgraded to cater for all staff required during the initial works;
- Purchase of shaft headgear complete with planning for freight from South Africa to Perth underway; and
- Optimisation studies, including technical studies, for mining the AM5 and AM6 orebodies (in addition to DFS mining volumes) commenced and progressing well.

By quarter end the Cosmos open-pit water level had dropped 37m, which is approximately two thirds of the total in-pit water before pumping started in January 2018. A total of 1.8 million m³ has been removed from the Cosmos open-pit which includes 0.8 million m³ of ground-water inflow from the surrounding aquifers and rock-mass.



Cosmos open-pit at end of December



Installation of the Schlumberger submersible pump

Post Definitive Feasibility Study (“DFS”) Projects

Post the DFS, a number of optimisation projects will be investigated in the short and medium term:

1. Odysseus Mine Optimisation Opportunities.

The optimisation opportunities identified during the DFS included:

- Stope footprints increased from the DFS based on the geotechnical modelling results of achievable paste strengths;
- Level development redesigned to suit larger stope configuration;
- Alternative destress slot geometries were reviewed with the DFS mine design retained;
- Additional geotechnical work to enhance resolution of the mining rock mass and structural models;
- Proposed underground workshop location and design review; and
- Primary ventilation network review.



2. Purchase of Second-hand Shaft Infrastructure Assets

Suitable shaft infrastructure assets were identified for sale in South Africa at the Impala 12N Shaft mine, owned by Impala Platinum Holdings Ltd north of Rustenburg. These assets closely match the required shaft duties and include;

- Headframe;
- Winder;
- Winder House including a 35t crane; and
- Various conveyances and attachments.

A comprehensive site visit was held in late December to advance the shaft refurbishment and relocation activities, with several companies bidding for various tender work packages.



3. DFS Shaft Detailed Engineering Design.

The DFS included a pre-feasibility study detailed engineering design, which will now be updated to final engineering level. The detailed design work has been awarded to the pre-feasibility specialist consultant who has a presence in both Australia and South Africa and more importantly has the necessary shaft experience.

Mill Recovery Enhancement Project (MREP)

MREP ramp up continued during the quarter with a summary below:

- The leaching circuit achieved continuous mode, albeit on lower than design throughput volumes;
- The sulphide precipitation circuit continued to produce nickel sulphide grading around 48% Ni;
- The pressure filter and separate bagging facilities were commissioned and are fully operational to enable the separate sale of product; and
- Following successful testing by several potential customers on small test samples of product, several containers of product have subsequently been sold into the spot market. Spot sales of the MREP product will continue while customers evaluate the product.



First container of MREP product packed for delivery

New Morning/Daybreak Project

The New Morning/ Daybreak (NMDB) Feasibility Study continued during the quarter, activities included:

- A number of environmental studies were completed, including waste characterisation, stygofauna, flora, and surface water. Remaining Environmental studies progressed well including groundwater, fauna and troglofauna, plus ongoing engagement with key regulators particularly Department of Mines Industry Resources and Safety (DMIRS) and Department of Water and Environmental Regulation (DWER);
- Completion of the 14 geotechnical drill-hole program;
- Bottle-roll leaching tests were started on oxide samples with final solids nickel recovery estimates expected in the March quarter; and
- Hydrological consultants completed a desk-top study and proposed a drilling program to investigate the hydrological aspects of the open-pit.



Cosmic Boy Scats Leaching Project

The Company is proposing to add a Scats BioHeap™ bacterial heap leach treatment plant to the existing Cosmic Boy concentrator operations. Since 2010, mill rejects or scats, generated from operating the Cosmic Boy concentrator, have been stockpiled within the apron of the Tailings Storage Facility. The stockpile is estimated to have a tonnage of approximately 279,580 tonnes with a nickel grade of approximately 1.51% representing approximately 4,194 tonnes of contained nickel.

It is proposed that the rejects from the mill and the stockpiled scats be treated using the BioHeap™ heap leach process to generate a liquor (nickel sulphate) stream rich in nickel. This stream would then be fed to the current MREP plant to be treated in the existing nickel sulphide precipitation circuit.

Preliminary leaching testwork undertaken has shown that the material is amenable to bacterial leaching using the BioHeap™ process with approximately 80% of the nickel recovered to solution. Additional optimisation testwork is currently underway with the aim of generating the data required for engineering design and costing of the proposed plant.

During the quarter, a geotechnical investigation was conducted on the proposed heap leach site, the results of which will be utilised in the completion of engineering designs of the heap leach pad and associated facilities.

Exploration

Overview

Exploration escalated into the December quarter across the Western Gawler, both within 100% WSA held ground and across the newly secured Farm-In and Joint Venture ground with Iluka, incorporating reverse circulation (RC) and air-core (AC) drilling programmes, and associated ground Electromagnetic (EM) surveys.

At Forrestania, the Company is pleased to announce promising drill intersections from the Cosmic Boy extensional exploration program, with two holes returning elevated nickel sulphides beneath the historic Cosmic Boy resource.

The Company also expanded its targeting reach at Cosmos, identifying several new target fronts that will form the basis of the next phase of exploration.

St George Mining continued to advance the Investigators prospect at Mt Alexander, with numerous new holes intersecting massive sulphide mineralisation. Tenement E29/638 is in joint venture between St George Mining (SQG 75%) and Western Areas (WSA 25% free-carried).

Exploration highlights over the quarter include:

- Completion of two drill-holes targeting the down-dip extension potential of the Cosmic Boy mineral system at Forrestania, with encouraging early results including 2m @1.85% Ni in CBD212W1;
- Successful completion at Western Gawler of an extensive heritage survey, with 164-line km's approved covering tenure over large sections of Iluka Farm-in Joint Venture ground; and
- Advancement of exploration targeting at Cosmos, with targets identified on the margins of the Neptune project, along with exploration targeting south of Alec Mairs, focussed on the Penelope prospect.



Cosmos

Exploration at Neptune

The Neptune project, located approximately 2km south of the Prospero high grade nickel mine, is interpreted to contain the highest volume of cumulate ultramafic bodies within the Cosmos Nickel Complex. The mineralised channel that hosts the Prospero and the Alec Mairs deposits (AM1, 2, 5 and 6) has the potential to extend towards, and link with, the mineralisation observed at Neptune.

No further drilling was completed at Neptune in the quarter, however the final assay results from the last round of drilling completed in the September quarter have now been returned with the significant intersections tabulated below. WCD021, located towards the northern extremity of the Neptune project, returned several significant zones, including a broader intersection of 16m @ 0.63% Ni, with mineralisation finely disseminated and as thin veinlets, hosted within a cumulate ultramafic sequence.

A full assessment of the data generated from the recently completed Neptune drilling is ongoing. The phase two drilling program confirmed that the Neptune ultramafic sequence hosts significant volumes of finely disseminated, high-tenor nickel sulphides and possesses a gentler east dip than previously interpreted. Additionally, results from a DHEM survey identified two, weak, off-hole conductors within WCD018 at a depth of 400 and 800m downhole, representing conductive responses and suggestive of semi-massive sulphides.

The Company believes that the northern and eastern flanks of Neptune have significant potential for the identification of additional accumulations of nickel sulphides and will form the focus for exploration targeting at Cosmos going forward. Drilling is anticipated to recommence during the June quarter FY19, pending the successful completion of a heritage survey in the March quarter.

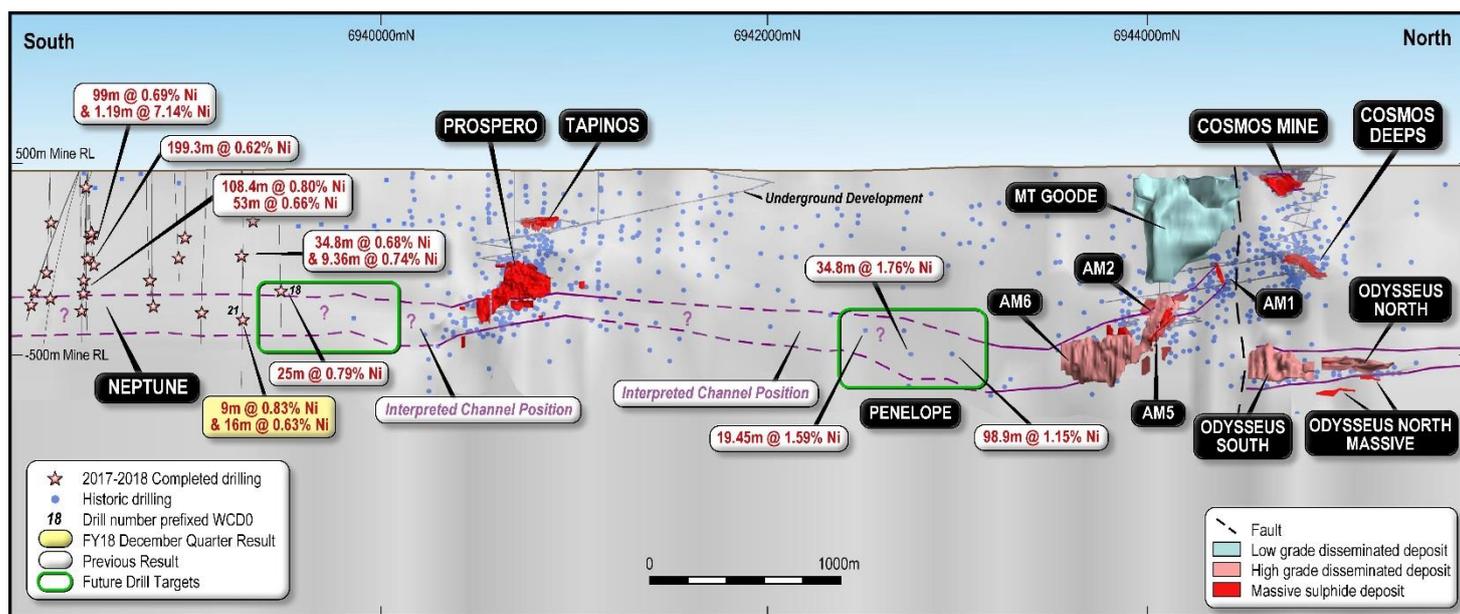
Exploration Results Nickel – Neptune December 2018

HOLEID	Easting	Northing	RL	EOH	Type	Dip	Azimuth	Width (m)	Ni %	FROM (m)
WCD021	261507.9	6939288.2	460.5	1113.7	DDH	-85	088	15	0.66	252
	and							9	0.83	543
	and							8.15	0.7	706.85
	and							16	0.63	766
	and							3.1	0.63	1012.3
	Including							0.3	3.58	1012.3



Prospero – Tapinos to Alec Mairs Corridor

The 2.5km corridor between the Prospero – Tapinos and Alec Mairs mineral deposits remains an ongoing area of interest for exploration. Recent targeting has focused on the Penelope prospect, positioned approximately 1km south of the Alec Mairs deposit, with historical drilling intersecting both low-grade disseminated (Mt Goode style) and higher grade, basal contact with proximal (Alec Mairs style) nickel sulphide mineralisation. Drilling is relatively sparse in this area, and the Company believes there is the potential for the discovery of additional high-grade disseminated to stringer style mineralisation. A heritage survey (coincident with the survey planned for Neptune) will be completed in the March quarter to support future drilling plans at Penelope.



Neptune to Odysseus interpreted Long section (Looking West)

Forrestania

Exploration at Flying Fox

During the September quarter an underground drilling and down-hole electromagnetic (DHEM) program was concluded, testing for the presence of accumulations of nickel sulphides beneath the existing Flying Fox mineral resource. Final interpretations of the DHEM survey were received in the December quarter from drill hole LUG088. Three on-hole plates were interpreted that appear to be superposed by a stronger unknown background response and, as such, these plates are considered poorly constrained. Two of these plates were associated with barren sulphide assemblage of pyrite and pyrrhotite. The third interpreted plate, whilst also associated with pyrite and pyrrhotite, was accompanied by up to 0.15% nickel. No immediate follow-up work is proposed for this target.

Exploration at Cosmic Boy

Located to the west of the Cosmic Boy Mill and concentrator, the Cosmic Boy Deposit (last mined in 1999, producing a total of 3.77Mt @ 1.46% Ni for 55,081t of contained nickel) is characterised by ultramafic-hosted, predominantly high-tenor, disseminated nickel sulphides, lying proximal to a basal contact with a banded iron formation sequence. Additional accumulations of nickel sulphide are located in hanging-wall positions, potentially emplaced due to structural repetition.

A review of the controls on mineralisation at Cosmic Boy was completed in the September quarter, from which two holes (a parent and a single wedge hole) were drilled, testing the potential for the mineralised ultramafic channel to reform at depth. A total of two holes for 1,796.4m were drilled in the quarter. Both holes successfully intersected disseminated style mineralisation approaching the basal contact target horizon, with drill-hole CBD211W1 returning a particularly

ACTIVITY REPORT

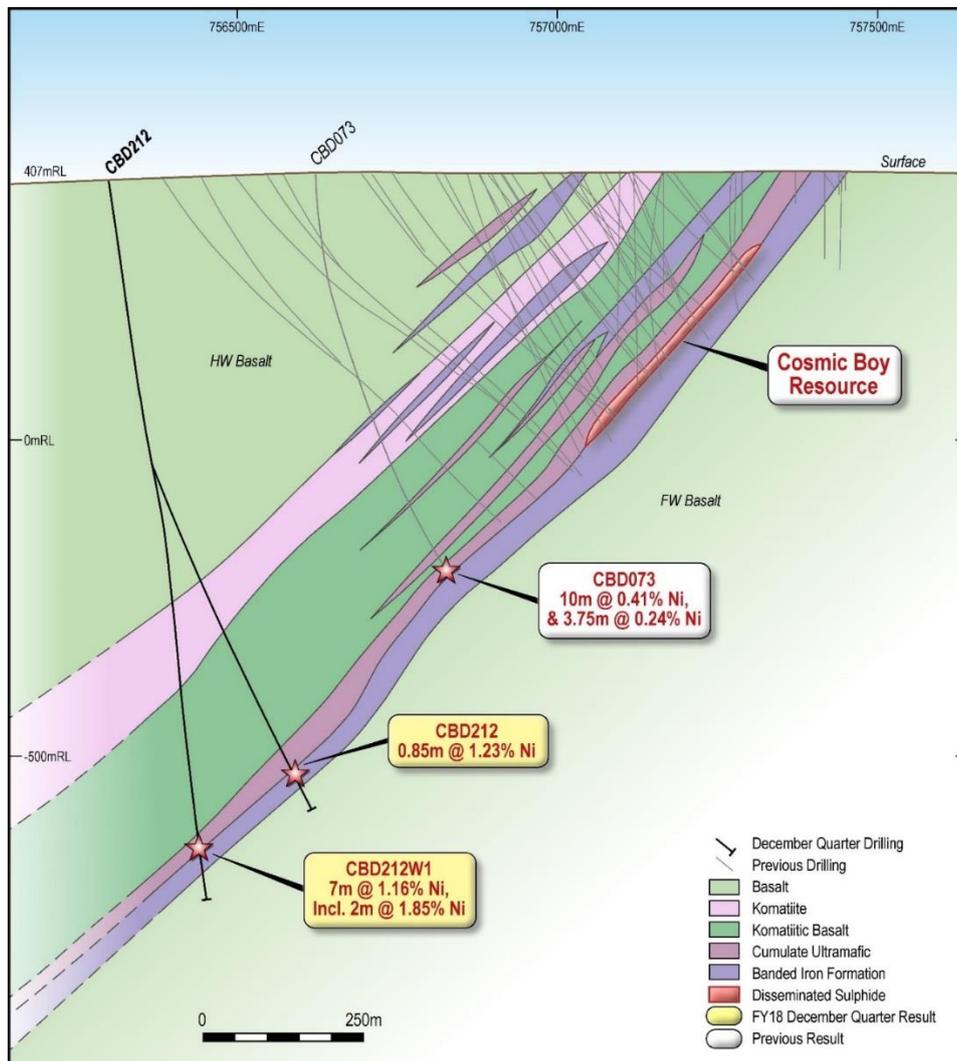
For the period ending 31 December 2018

WESTERN AREAS LTD



encouraging interval of 2m @ 1.85% Ni within a broader zone of 7m @ 1.16% Ni (from 1,059m). Follow-up drilling is now planned in the March quarter to test the area immediately adjacent to CBD211W1 (down-dip and along strike) and scope out the potential for a new mineralised channel.

Exploration Results Nickel – Cosmic Boy December 2018										
HOLEID	Easting	Northing	RL	EOH	Type	Dip	Azimuth	Width (m)	Ni %	FROM (m)
CBD212	756295	6391700.6	407	1058.2	DDH	-82	90	0.30	0.88	724.30
	and							2.10	0.64	963
	and							0.95	0.70	970.8
	including							0.2	1.39	971.55
	and							0.85	1.23	976.15
CBD212W1	756300	6391700.6	407	1137.5	DDH	-82	91	0.95	0.59	707.0
	and							5.00	0.60	1049.0
	and							1.13	0.54	1055.87
	and							7.00	1.16	1059.0
	including							2.00	1.85	1064.0



Cosmic Boy 6391700mN Cross Section (Looking North)



Regional Exploration

Western Gawler (WSA 100%)

Reverse circulation and air-core drilling programmes were completed during the quarter, with several prospects targeted, including Thunderdome, Beyond Thunderdome, Mystic, Atomic Café, Crack in the Earth and Interceptor (Nullarbor). The programs were designed to test geochemical anomalies identified from earlier air-core drilling along with anomalous conductive responses from Moving Loop electromagnetic (MLEM) surveys. Furthermore, drill-holes were designed to provide additional basement geological information in areas with limited drilling coverage, below the cover sequence. For the quarter, a total of 33 holes were completed for 4,267m.

Thunderdome Corridor

Drill programs targeted a series of mafic intrusive rocks associated with discrete magnetic anomalies. Drilling intersected a complex array of pyroxene – hornblende mafic intrusive bodies hosted within intermediate gneiss and mafic amphibolite. Assay results for the first of seven drill-holes were received during the quarter, with significant results returned from 18WGRC377 including 3m @ 0.46% Cu (from 27m), including 1m @ 0.81% Cu (from 28m). Several other drill-holes intersected anomalous copper zones that were also accompanied by disseminated sulphide (pyrite), with highlights tabulated below.

Exploration Results - Western Gawler December Quarter

HOLEID	Easting	Northing	RL	EOH	Type	Dip	Azi	Width (m)	Cu	S %	FROM (m)
18WGRC377	217270	6534900	68	256	RC	-60	120	3	0.46%	0.01	27
<i>including</i>								1	0.81%	0.01	28
and								215	574 ppm	0.46	38
18WGRC370	218510	6526461	64	130	RC	-90	0	4	0.12%	0.82	56
and								14	573ppm	0.99	69
18WGRC371	218370	6527760	63	142	RC	-90	0	28	509 ppm	0.46	82

During the quarter, drilling has identified several zones of copper anomalism associated with discrete magnetic anomalies within sheared mafic / amphibolite host rocks. The results highlight the potential for significant copper mineralisation within the Thunderdome Corridor, where further work will focus on refinement of geological models and extending drilling coverage across these prospective areas.

Assay results for drilling at Atomic Café, Crack in the Earth, Mystic and Interceptor (Nullarbor) prospects are expected in the March quarter.

Moving Loop EM Surveys

Moving Loop Electromagnetic (MLEM) surveying was completed across nine areas to follow-up airborne electromagnetic anomalies identified in the September quarter.

A bedrock anomaly was identified at Crack in the Earth prospect on the margin of a coincident magnetic and gravity anomaly. Modelling on the anomaly identified a shallow conductor of moderate strength. This conductive response was tested with drill-hole 18WGRC392, intersecting up to 5% disseminated sulphide (pyrite) within a felsic-granitic host sequence from 48-54m (within close proximity to the targeted depth). Assay results are expected in the coming quarter.

At Thunderdome South a north-south oriented MLEM line was completed to further define a broad anomaly identified during 2017 surveying. Modelling of the anomaly indicates a broad, low-conductive source at depth.



Strandline Farm-in and Joint Venture (WSA earning up to 90%) EL 5880

MLEM surveying was completed over targets identified during earlier airborne EM surveying. The ground survey identified broad conductive trends, however no bedrock anomalies were recorded. Work plans for the coming quarter include focused air-core drilling of these conductive trends.

Iluka Farm-in and Joint Venture (WSA earning up to 75%) EL 5217, EL5452, EL 5675, EL 5878 and EL5879.

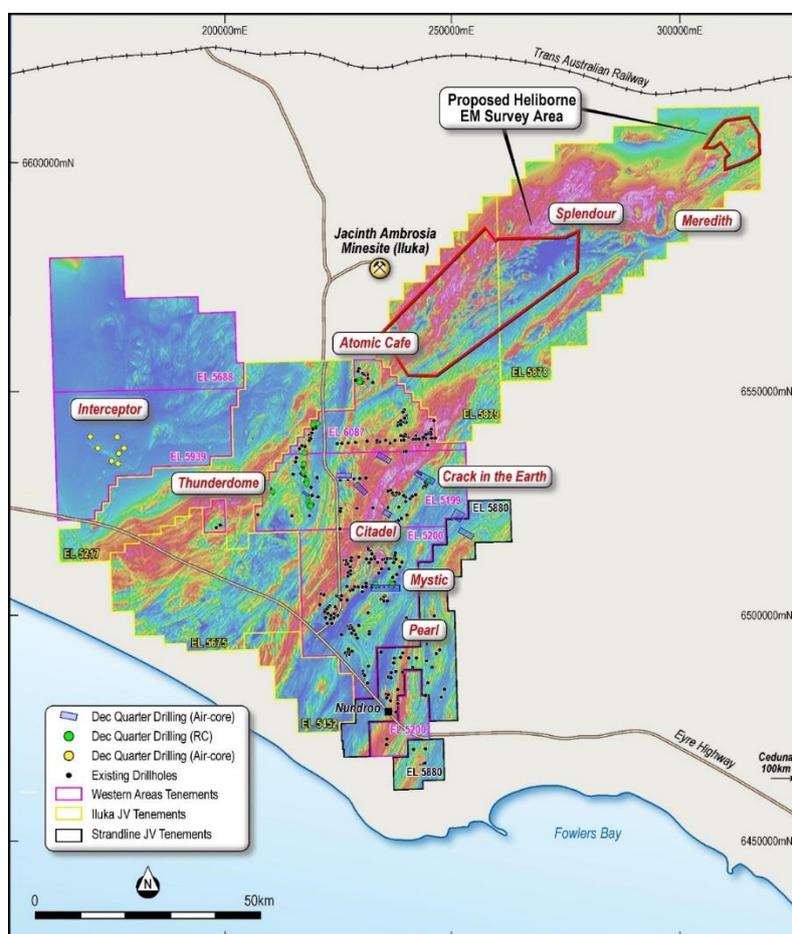
In the September quarter, the Company announced an expansion of its Western Gawler exploration strategy via the execution of a Farm-in and Joint Venture Agreement with Iluka (Eucla Basin) Pty Limited. Building off momentum generated from recently completed drilling on 100% WSA ground, the Company has moved to establish a pipeline of exploration programs across this Farm-In and Joint Venture ground. Two key projects were advanced in the December quarter, with a final date confirmed for a regionally extensive airborne EM survey (mid-January) along with the successful execution of a heritage survey to facilitate drill targeting in 2019.

Airborne Electromagnetic (EM) Survey Planning

Final planning for a 1,400-line km airborne EM survey was achieved in the quarter, with scheduling and inclement weather delays resulting in a mid-January 2019 date for commencement. Planned over 760km² at a 400m line spacing (with an opportunity to infill to 200m), the survey is designed to rapidly screen a large prospective corridor interpreted to host multiple intrusions for semi-massive to massive sulphides to a depth of 250m.

Heritage Surveying

In collaboration with the Far West Coast Aboriginal Corporation (FWCAC) and the Aboriginal Lands Trust (ALT), the Company completed a heritage survey in December. Findings from the survey resulted in heritage approved drill sites and access tracks totalling 164-line km's covering prospective areas.



Western Gawler – December Quarter Activity



-ENDS-

COMPETENT PERSON'S STATEMENT:

The information within this report as it relates to mineral resources, ore reserves and exploration results is based on information compiled by Mr Andre Wulfse, Mr Marco Orunesu Preiata and Mr Graeme Gribbin of Western Areas Ltd. Mr Wulfse is a Fellow of AusIMM, Mr Orunesu Preiata is a member of AusIMM and Mr Gribbin is a member of AIG. Mr Wulfse, Mr Orunesu Preiata and Mr Gribbin are all full time employees of Western Areas. Mr Wulfse, Mr Orunesu Preiata and Mr Gribbin have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.' Mr Gribbin, Mr Wulfse and Mr Orunesu Preiata consent to the inclusion in the report of the matters based on the information in the form and context in which it appears.

FORWARD LOOKING STATEMENT:

This release contains certain forward-looking statements including nickel production targets. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production and expected costs.

Examples of forward looking statements used in this report include: "Evaluation of the upside opportunities at Odysseus has commenced, including a mining optimisation assessment for additional production from the AM5 and AM6 deposits", and, "the current fundamental outlook for nickel appears strong, with the LME nickel stockpile falling towards 200kt during January, the lowest level in over five years, demonstrating that demand continues to outstrip supply", and, "the nickel price has started the new calendar year on a positive trend, with stainless steel consumption remaining healthy and the outlook for nickel-intensive EV battery demand remaining promising".

These forward-looking statements are subject to a variety of risks and uncertainties beyond the Company's ability to control or predict which could cause actual events or results to differ materially from those anticipated in such forward-looking statements. Western Areas Ltd undertakes no obligation to revise these forward-looking statements to reflect subsequent events or circumstances.

This announcement does not include reference to all available information on the Company and should not be used in isolation as a basis to invest in Western Areas Ltd. Potential investors should refer to Western Areas' other public releases and statutory reports and consult their professional advisers before considering investing in the Company.



Western Areas Ore Reserve and Mineral Resource Statement – Effective date 31st December 2018

	Tonnes	Grade Ni%	Ni Tonnes	Classification	JORC Code
Ore Reserves					
1. Flying Fox Area	721,400	3.3	23,650	Probable Ore Reserve	2012
2. Spotted Quoll Area	15,500	3.7	580	Proved Ore Reserve	2012
	1,565,900	4.0	62,710	Probable Ore Reserve	2012
3. Diggers Area					
Digger South	2,016,000	1.4	28,950	Probable Ore Reserve	2004
Digger Rocks	93,000	2.0	1,850	Probable Ore Reserve	2004
TOTAL FORRESTANIA ORE RESERVE	4,411,800	2.7	117,740		
4. Cosmos area					
Odysseus South	4,483,700	1.9	85,620	Probable Ore Reserve	2012
Odysseus North	3,651,900	2.2	78,900	Probable Ore Reserve	2012
TOTAL COSMOS ORE RESERVE	8,135,600	2.0	164,520		
TOTAL WESTERN AREAS ORE RESERVE	12,547,400	2.2	282,260		
Mineral Resources					
1. Flying Fox Area					
T1 South	132,279	4.6	6,085	Indicated Mineral Resource	2012
	55,219	3.9	2,154	Inferred Mineral Resource	2012
T1 North	55,779	5.9	3,290	Indicated Mineral Resource	2012
OTZ Sth Massive Zone	20,560	4.1	843	Inferred Mineral Resource	2012
OTZ Sth Massive Zone	162,338	4.0	6,574	Indicated Mineral Resource	2012
T4 Massive Zone	187,671	5.6	10,440	Indicated Mineral Resource	2012
T5 Massive Zone + Pegs	781,090	5.2	40,454	Indicated Mineral Resource	2012
T6 Massive Zone	86,657	5.6	4,865	Indicated Mineral Resource	2012
T7 Massive Zone	256,977	2.1	5,303	Inferred Mineral Resource	2012
Total High Grade	1,738,570	4.6	80,007		
T5 Flying Fox Disseminated Zone	197,200	0.8	1,590	Indicated Mineral Resource	2004
	357,800	1.0	3,460	Inferred Mineral Resource	2004
T5 Lounge Lizard Disseminated Zone	4,428,000	0.8	36,000	Indicated Mineral Resource	2004
Total Disseminated Flying Fox/Lounge Lizard	4,983,000	0.8	41,050		
Total FF/LL	6,721,570	1.8	121,057		
2. New Morning / Daybreak					
Massive Zone	340,126	3.3	11,224	Indicated Mineral Resource	2012
	78,067	3.9	3,025	Inferred Mineral Resource	2012
Disseminated Zone	3,318,468	1.2	41,181	Indicated Mineral Resource	2012
	2,496,658	1.3	32,498	Inferred Mineral Resource	2012
Total New Morning / Daybreak	6,233,319	1.4	87,928		
3. Spotted Quoll Area					
Spotted Quoll	8,590	6.7	577	Measured Mineral Resource	2012
	1,503,697	5.5	83,114	Indicated Mineral Resource	2012
	144,581	3.1	4,540	Inferred Mineral Resource	2012
Total Spotted Quoll	1,656,868	5.3	88,231		
Beautiful Sunday	480,000	1.4	6,720	Indicated Mineral Resource	2004
Total Western Belt	15,091,757	2.0	303,936		
4. Cosmic Boy Area					
Cosmic Boy	180,900	2.8	5,050	Indicated Mineral Resource	2004
Seagull	195,000	2.0	3,900	Indicated Mineral Resource	2004
Total Cosmic Boy Area	375,900	2.4	8,950		
5. Diggers Area					
Diggers South - Core	3,000,000	1.5	44,700	Indicated Mineral Resource	2004
Diggers South - Halo	4,800,000	0.7	35,600	Indicated Mineral Resource	2004
Digger Rocks - Core	54,900	3.7	2,030	Indicated Mineral Resource	2004
Digger Rocks - Core	172,300	1.1	1,850	Inferred Mineral Resource	2004
Digger Rocks - Halo	1,441,000	0.7	10,350	Inferred Mineral Resource	2004
Purple Haze	560,000	0.9	5,040	Indicated Mineral Resource	2004
Total Diggers Area	10,028,200	1.0	99,570		
TOTAL FORRESTANIA MINERAL RESOURCE	25,495,857	1.6	412,456		
6. Cosmos Area					
AM5	479,914	2.6	12,430	Indicated Mineral Resource	2012
	26,922	1.9	509	Inferred Mineral Resource	2012
AM6	1,704,548	2.7	45,171	Indicated Mineral Resource	2012
	329,443	2.5	8,203	Inferred Mineral Resource	2012
Odysseus South Disseminated	4,016,949	2.1	84,767	Indicated Mineral Resource	2012
	219,641	2.0	4,302	Inferred Mineral Resource	2012
Odysseus North - Disseminated	3,128,943	2.6	81,156	Indicated Mineral Resource	2012
	225,248	2.7	6,111	Inferred Mineral Resource	2012
Odysseus North - Massive	70,106	12.6	8,814	Indicated Mineral Resource	2012
	124,900	11.2	14,002	Inferred Mineral Resource	2012
Total Cosmos Area	10,326,614	2.6	265,465		
7. Mt Goode Area					
Mt Goode	13,563,000	0.8	105,791	Measured Mineral Resource	2012
	27,363,000	0.6	158,705	Indicated Mineral Resource	2012
	12,009,000	0.5	62,447	Inferred Mineral Resource	2012
Total Mt Goode Area	52,935,000	0.6	326,943		
TOTAL COSMOS MINERAL RESOURCE	63,261,614	0.9	592,408		
TOTAL WESTERN AREAS MINERAL RESOURCE	88,757,471	1.1	1,004,864		



JORC 2012 TABLE 1 – Forrestania Exploration

Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. 	<ul style="list-style-type: none"> Exploration targets were tested and sampled from diamond drilling (DD) core, and holes were mostly drilled perpendicular to the strike (north-south) of the stratigraphy. Drill holes were located initially with hand held GPS and later surveyed by differential GPS. DD holes were used to obtain high quality samples that were fully oriented and logged for lithological, structural, geotechnical attributes. Each sample of diamond drill core submitted to ALS laboratories at Malaga, Perth was weighed to determine density by the weight in air, weight in water method. All sampling was conducted under WSA QAQC protocols which are in accordance with industry best practice. Diamond drill core (NQ2) is 1/4 core sampled on geological intervals (0.2m - 1.5m) to achieve sample weights under 2kgs. Samples were crushed, dried and pulverised (total prep) to produce a sub sample for analysis by 4 acid digest with an ICP/AES and FA/ICP (Au, Pt, Pd) finish.
	<ul style="list-style-type: none"> Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 	<ul style="list-style-type: none"> All samples were prepared and assayed by independent commercial laboratories whose instruments are regularly calibrated Geophysical survey QC parameters were reviewed by independent supervising geophysicists from Newexco Services Pty Ltd
	<ul style="list-style-type: none"> Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> Diamond core is typically marked at 1m intervals Sample intervals marked up by geologists based on geology. Sampled mineralisation intervals are sent to a commercial laboratory for crushing and grinding before assaying.
Drilling techniques	<ul style="list-style-type: none"> Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> Diamond Drilling utilized a UDR1200 rig Diamond drilling comprises HQ and NQ2 sized core. Historical data is derived from both surface and underground diamond drilling
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> Diamond core recoveries have been logged and recorded in the database Diamond core are logged and recorded in the database. Overall recoveries are >95% and there was no core loss issues or significant sample recovery problems. Core loss is noted where it occurs. Diamond core was reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the drillers. The drilling by diamond core method has high recoveries. The massive sulphide style of mineralisation and the consistency of the mineralised intervals are considered to preclude any issue of sample bias due to material loss or gain. Drilling in the oxidised profile results in more incomplete core recoveries.
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. 	<ul style="list-style-type: none"> All geological logging was carried out to a high standard using well established geology codes in LogChief software. All logging recorded in a Panasonic Toughbook PC.
	<ul style="list-style-type: none"> Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. 	<ul style="list-style-type: none"> Core is photographed in both dry and wet form and logging is done in detail.
	<ul style="list-style-type: none"> The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> All diamond drill holes were logged and photographed in full. RC holes are logged in full.
Sub-sampling techniques and	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. 	<ul style="list-style-type: none"> Diamond core is sampled as quarter core only; cut by the field crew on site by diamond saw.

ACTIVITY REPORT

For the period ending 31 December 2018

WESTERN AREAS LTD



Criteria	JORC Code explanation	Commentary
sample preparation	<ul style="list-style-type: none"> If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. 	<ul style="list-style-type: none"> Not applicable for this program
	<ul style="list-style-type: none"> For all sample types, the nature, quality and appropriateness of the sample preparation technique. 	<ul style="list-style-type: none"> Sample preparation follows industry best practice involving oven drying, coarse crushing and pulverising.
	<ul style="list-style-type: none"> Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 	<ul style="list-style-type: none"> The field crew prepares and inserts the QAQC certified reference materials into the relevant calico bags. OREAS and Geostats standards have been selected based on their grade range and mineralogical properties, with approximately 12 different standards used.
	<ul style="list-style-type: none"> Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. 	<ul style="list-style-type: none"> Standards and blanks are inserted approximately every 20 samples or at least one every hole for both diamond and RC drilling.
	<ul style="list-style-type: none"> Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> All geological logging was carried out to a high standard using well established geology codes in LogChief software.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 	<ul style="list-style-type: none"> All samples are assayed by independent certified commercial laboratories. The laboratories used are experienced in the preparation and analysis of nickel sulphide ores.
	<ul style="list-style-type: none"> For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. 	<ul style="list-style-type: none"> No Geophysical tools or handheld XRF instruments were used to determine any element concentrations that were subsequently used for MRE or exploration reporting purposes.
	<ul style="list-style-type: none"> Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. 	<ul style="list-style-type: none"> Certified reference materials are included in all batches dispatched at an approximate frequency of 1 per 25 samples, with a minimum of two per batch. Field duplicates are inserted into submissions at an approximate frequency of 1 in 25, with placement determined by Nickel grade and homogeneity. Lab checks, both pulp and crush, are taken alternately by the lab at a frequency of 1 in 25. Accuracy and precision were assessed using industry standard procedures such as control charts and scatter plots. Evaluations of standards are completed on a monthly, quarterly and annual basis using QAQCR.
Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. 	<ul style="list-style-type: none"> Geological interpretation using intersections peer viewed by prior company and WSA geologists.
	<ul style="list-style-type: none"> The use of twinned holes. 	<ul style="list-style-type: none"> Not applicable
	<ul style="list-style-type: none"> Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. 	<ul style="list-style-type: none"> All primary geophysical data were recorded digitally and sent in electronic format to Newexco Services Pty Ltd for quality control and evaluation. All geological logging was carried out to a high standard using well established geology codes in LogChief software. All other data including assay results are imported via Datashed software. Drillholes, sampling and assay data is stored in a SQL Server database located in a dedicated data centre.
	<ul style="list-style-type: none"> Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> none
Location of data points	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. 	<ul style="list-style-type: none"> Downhole surveys completed using the Axis "Champ Gyro™" north seeking gyroscopic instrument on all resource definition and Exploration diamond holes. Exploration RC holes were surveyed down-hole using an Eastman single shot camera. Underground drill-hole collar locations verified via survey pickup.
	<ul style="list-style-type: none"> Specification of the grid system used. 	<ul style="list-style-type: none"> MGA94 Zone 51 grid coordinate system is used. A two point transformation is used to convert the data from AMG84_51 mine grid and vice versa.
	<ul style="list-style-type: none"> Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> The project area is flat and the topographic data density is adequate for MRE purposes Collar positions were picked up by suitably qualified surface and underground surveyors

ACTIVITY REPORT

For the period ending 31 December 2018

WESTERN AREAS LTD



Criteria	JORC Code explanation	Commentary
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. 	<ul style="list-style-type: none"> Drill hole spacing at Cosmic Boy comprised one parent and one wedge hole (using the same surface collar reference point) with target intersections approximately 200m apart. For other projects, drill spacing will vary based on the target being tested.
	<ul style="list-style-type: none"> Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. 	<ul style="list-style-type: none"> Samples are collected at 1m intervals (Diamond and Aircore) and 4m composites (RC)
	<ul style="list-style-type: none"> Whether sample compositing has been applied. 	<ul style="list-style-type: none"> No
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 	<ul style="list-style-type: none"> The majority of the drill holes are orientated to achieve intersection angles as close to perpendicular as possible.
	<ul style="list-style-type: none"> If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	<ul style="list-style-type: none"> No orientation based sampling bias has been observed in the data, intercepts are reported as downhole lengths.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Standard West Australian mining industry sample security measures were observed.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> Adrian Black of Newexco Pty Ltd (a member of the AIG), an independent exploration company, has reviewed the data and sampling techniques employed by the Company.

JORC 2012 TABLE 1 – Forrestania Exploration

Section 2: Reporting of Exploration Results (Criteria listed in Section 1, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	<ul style="list-style-type: none"> Forrestania Nickel Operations comprises approximately 125 tenements covering some 900km² within the Central Yilgarn Province. The tenements include exploration licences, prospecting licences, general purpose leases, miscellaneous licences and mining leases. Western Areas wholly owns 106 tenements, 55 tenements of which were acquired from Outokumpu in 2002 and a further 51 tenements acquired from Kagara in March 2012 (some which are subject to various third party royalty agreements). The remainder of the tenements are subject to Joint Ventures. A number of the Kagara tenements are subject to third party royalty agreements. All the tenements are in good standing. Six tenements are pending grant.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> Western Areas has been exploring its wholly owned tenements since 2002. The tenements subject to the Kagara sale which took place in March 2012 were explored by Kagara since 2006 and Lion Ore and St Barbara prior to that time. Western Areas has managed the Mt Gibb JV since 2009 (Great Western Exploration explored the ground prior to that time). Kidman Resources Limited has entered into a Farm-in and Joint Venture with Western Areas, with a Stage 1 opportunity to earn in to 50% lithium rights.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The FNO lies within the Forrestania Greenstone Belt, which is part of the Southern Cross Province of the Yilgarn Craton in Western Australia. The main deposit type is the komatiite hosted, disseminated to massive Nickel sulphide deposits, which include the Flying Fox and Spotted Quoll deposits which are currently being mined. The mineralisation occurs in association with the basal section of high MgO cumulate ultramafic rocks. The greenstone succession in the FNO district also hosts a number of orogenic lode gold deposits of which Bounty Gold Mine is the biggest example. Some exploration for this style of deposit is undertaken by Western areas from time to time in the FNO tenements.

ACTIVITY REPORT

For the period ending 31 December 2018

WESTERN AREAS LTD



Criteria	JORC Code explanation	Commentary																											
Drill hole Information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<ul style="list-style-type: none"> Drill hole summary details supporting reported intersections from the Cosmic Boy Project are captured in the enclosed table. <table border="1"> <thead> <tr> <th>HOLEID</th> <th>Easting</th> <th>Northing</th> <th>RL</th> <th>EOH Depth (m)</th> <th>Type</th> <th>DIP</th> <th>Azimuth</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>CBD212</td> <td>756296</td> <td>6391701</td> <td>415</td> <td>1058.2</td> <td>DDH</td> <td>-82</td> <td>90</td> <td>Complete</td> </tr> <tr> <td>CBD212W1</td> <td>756296</td> <td>6391701</td> <td>415</td> <td>1137.5</td> <td>DDH</td> <td>-82</td> <td>91</td> <td>Complete</td> </tr> </tbody> </table>	HOLEID	Easting	Northing	RL	EOH Depth (m)	Type	DIP	Azimuth	Comments	CBD212	756296	6391701	415	1058.2	DDH	-82	90	Complete	CBD212W1	756296	6391701	415	1137.5	DDH	-82	91	Complete
HOLEID	Easting	Northing	RL	EOH Depth (m)	Type	DIP	Azimuth	Comments																					
CBD212	756296	6391701	415	1058.2	DDH	-82	90	Complete																					
CBD212W1	756296	6391701	415	1137.5	DDH	-82	91	Complete																					
Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> Standard weighted averaging of drill hole intercepts were employed. No maximum or minimum grade truncations were used in the estimation. The reported assays have been length and bulk density weighted. A lower arbitrary 0.5% Ni cut-off is applied, with no top cut applied. High grade intercepts internal to broader zones of mineralisation are reported as included intervals. Metal equivalents have not been used 																											
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known'). 	<ul style="list-style-type: none"> Drill hole intersections may not be true widths 																											
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> Included within report 																											
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> All relevant assay results have been reported 																											
Other substantive exploration data	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	<ul style="list-style-type: none"> Included within report Geophysics Information on structure type, dip, dip direction alpha and beta angles, texture, shape, roughness and fill material is stored in the structural logs in the database. 																											
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	<ul style="list-style-type: none"> Preliminary plans are included within the report Future explorations programs may change depending on results and strategy 																											



JORC 2012 TABLE 1 – Cosmos Nickel Complex Exploration

Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. 	<ul style="list-style-type: none"> Exploration targets were tested and sampled from diamond drilling (DD) core, and holes were mostly drilled perpendicular to the strike (north-south) of the stratigraphy. Drill holes were located initially with hand held GPS and later surveyed by differential GPS. DD holes were used to obtain high quality samples that were fully oriented and logged for lithological, structural, geotechnical attributes. Each sample of diamond drill core submitted to ALS laboratories at Malaga, Perth was weighed to determine density by the weight in air, weight in water method. All sampling was conducted under WSA QAQC protocols which are in accordance with industry best practice. Diamond drill core (NQ2) is 1/4 core sampled on geological intervals (0.2m - 1.5m) to achieve sample weights under 2kgs. Samples were crushed, dried and pulverised (total prep) to produce a sub sample for analysis by 4 acid digest with an ICP/AES and FA/ICP (Au, Pt, Pd) finish.
	<ul style="list-style-type: none"> Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 	<ul style="list-style-type: none"> All samples were prepared and assayed by independent commercial laboratories whose instruments are regularly calibrated Geophysical survey QC parameters were reviewed by independent supervising geophysicists from Newexco Services Pty Ltd
	<ul style="list-style-type: none"> Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> Diamond core is typically marked at 1m intervals Sample intervals marked up by geologists based on geology. Sampled mineralisation intervals are sent to a commercial laboratory for crushing and grinding before assaying.
Drilling techniques	<ul style="list-style-type: none"> Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> Diamond Drilling utilized a UDR1200 rig Diamond drilling comprises HQ and NQ2 sized core. Historical data is derived from both surface and underground diamond drilling
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> Diamond core recoveries have been logged and recorded in the database Diamond core are logged and recorded in the database. Overall recoveries are >95% and there was no core loss issues or significant sample recovery problems. Core loss is noted where it occurs. Diamond core was reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the drillers. RC recoveries are logged and recorded in the database and RC samples were visually checked for recovery, moisture and contamination. Drilling close to the lake shore for the Neptune drilling resulted in high water flows which reduced the sample size and loss of fines from the sample. The drilling by diamond core method has high recoveries. The massive sulphide style of mineralisation and the consistency of the mineralised intervals are considered to preclude any issue of sample bias due to material loss or gain. Drilling in the oxidised profile results in more incomplete core recoveries.
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. 	<ul style="list-style-type: none"> All geological logging was carried out to a high standard using well established geology codes in LogChief software. All logging recorded in a Panasonic Toughbook PC .
	<ul style="list-style-type: none"> Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. 	<ul style="list-style-type: none"> Core is photographed in both dry and wet form and logging is done in detail.
	<ul style="list-style-type: none"> The total length and percentage of the relevant 	<ul style="list-style-type: none"> All diamond drill holes were logged and photographed in full. RC holes are

ACTIVITY REPORT

For the period ending 31 December 2018

WESTERN AREAS LTD



Criteria	JORC Code explanation	Commentary
	<i>intersections logged.</i>	<i>logged in full.</i>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> 	<ul style="list-style-type: none"> <i>Diamond core is sampled as quarter core only; cut by the field crew on site by diamond saw.</i>
	<ul style="list-style-type: none"> <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> 	<ul style="list-style-type: none"> <i>RC samples were collected on the rig using cone splitters. Composite samples are collected via riffle splitting or spearing to generate a single sample of less than 3kg.</i>
	<ul style="list-style-type: none"> <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> 	<ul style="list-style-type: none"> <i>Sample preparation follows industry best practice involving oven drying, coarse crushing and pulverising.</i>
	<ul style="list-style-type: none"> <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> 	<ul style="list-style-type: none"> <i>The field crew prepares and inserts the QAQC certified reference materials into the relevant calico bags.</i> <i>OREAS and Geostats standards have been selected based on their grade range and mineralogical properties, with approximately 12 different standards used.</i>
	<ul style="list-style-type: none"> <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i> 	<ul style="list-style-type: none"> <i>Standards and blanks are inserted approximately every 20 samples or at least one every hole for both diamond and RC drilling.</i>
	<ul style="list-style-type: none"> <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> <i>All geological logging was carried out to a high standard using well established geology codes in LogChief software.</i>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> 	<ul style="list-style-type: none"> <i>All samples are assayed by independent certified commercial laboratories.</i> <i>The laboratories used are experienced in the preparation and analysis of nickel sulphide ores.</i>
	<ul style="list-style-type: none"> <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i> 	<ul style="list-style-type: none"> <i>No Geophysical tools or handheld XRF instruments were used to determine any element concentrations that were subsequently used for MRE or exploration reporting purposes.</i>
	<ul style="list-style-type: none"> <i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i> 	<ul style="list-style-type: none"> <i>Certified reference materials are included in all batches dispatched at an approximate frequency of 1 per 25 samples, with a minimum of two per batch.</i> <i>Field duplicates are inserted into submissions at an approximate frequency of 1 in 25, with placement determined by Nickel grade and homogeneity. Lab checks, both pulp and crush, are taken alternately by the lab at a frequency of 1 in 25.</i> <i>Accuracy and precision were assessed using industry standard procedures such as control charts and scatter plots.</i> <i>Evaluations of standards are completed on a monthly, quarterly and annual basis using QAQCR.</i>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <i>The verification of significant intersections by either independent or alternative company personnel.</i> 	<ul style="list-style-type: none"> <i>Geological interpretation using intersections peer viewed by prior company and WSA geologists.</i>
	<ul style="list-style-type: none"> <i>The use of twinned holes.</i> 	<ul style="list-style-type: none"> <i>Not applicable</i>
	<ul style="list-style-type: none"> <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> 	<ul style="list-style-type: none"> <i>All primary geophysical data were recorded digitally and sent in electronic format to Newexco Services Pty Ltd for quality control and evaluation.</i> <i>All geological logging was carried out to a high standard using well established geology codes in LogChief software.</i> <i>All other data including assay results are imported via Datashed software.</i> <i>Drillholes, sampling and assay data is stored in a SQL Server database located in a dedicated data centre.</i>
	<ul style="list-style-type: none"> <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> <i>none</i>
<i>Location of data points</i>	<ul style="list-style-type: none"> <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i> 	<ul style="list-style-type: none"> <i>Downhole surveys completed using the Axis "Champ Gyro™" north seeking gyroscopic instrument on all resource definition and Exploration diamond holes. Exploration RC holes were surveyed down-hole using an Eastman single shot camera. Underground drill-hole collar locations verified via survey pickup.</i>
	<ul style="list-style-type: none"> <i>Specification of the grid system used.</i> 	<ul style="list-style-type: none"> <i>MGA94 Zone 51 grid coordinate system is used.</i> <i>A two point transformation is used to convert the data from AMG84_51 mine grid and vice versa.</i>

ACTIVITY REPORT

For the period ending 31 December 2018

WESTERN AREAS LTD



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> The project area is flat and the topographic data density is adequate for MRE purposes Collar positions were picked up by suitably qualified surface and underground surveyors
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> Drill hole spacing at Neptune is varied according to nature of target type. Where initial drilling was undertaken holes are nominally 250m to 400m apart. Where mineralisation is identified holes are spaced at an approx 100m to 200m spacing. For other projects, drill spacing will vary based on the target being tested. Samples are collected at 1m intervals (Diamond and Aircore) and 4m composites (RC) Sampling compositing has been applied to some of the RC sampling (2m to 4m). Where significant results are intersected, RC samples will be broken into 1m intervals.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	<ul style="list-style-type: none"> The majority of the drill holes are orientated to achieve intersection angles as close to perpendicular as possible. The steep dipping nature of the stratigraphy at some targets (70° to 80°) means this is not always achieved. No orientation based sampling bias has been observed in the data, intercepts are reported as downhole lengths.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Standard West Australian mining industry sample security measures were observed.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> Adrian Black of Newexco Pty Ltd (a member of the AIG), an independent exploration company, has reviewed the data and sampling techniques employed by the Company.

JORC 2012 TABLE 1 – Cosmos Nickel Complex Exploration

Section 2: Reporting of Exploration Results (Criteria listed in Section 1, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	<ul style="list-style-type: none"> Cosmos Nickel Complex comprises 26 tenements covering some 9,226Ha. The tenements include mining leases and miscellaneous licenses Western Areas wholly owns 23 tenements, which were acquired from Xstrata Nickel Australasia in October 2015. The remainder of the tenements (3) are subject to a Joint Venture with Alkane Resources NL, where Western Areas has earned 80.6% interest All tenements are in good standing
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> Historical nickel exploration has been completed by Glencore PLC, Xstrata Nickel Australasia and Jubilee Mines NL
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The deposits form part of the Cosmos Nickel Complex, which lies within the Agnew-Wiluna Belt of the central Yilgarn Craton, Western Australia The deposit style is komatiite hosted, disseminated to massive nickel sulphides. The mineralisation typically occurs in association with the basal zone of high MgO cumulate ultramafic rocks. Many of the higher grade ore bodies in the Cosmos Nickel Complex also show varying degrees of remobilisation, and do not occur in a typical mineralisation profile

ACTIVITY REPORT

For the period ending 31 December 2018

WESTERN AREAS LTD



Criteria	JORC Code explanation	Commentary																		
Drill hole Information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> – easting and northing of the drill hole collar – elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar – dip and azimuth of the hole – down hole length and interception depth – hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<ul style="list-style-type: none"> Drill hole summary details supporting reported intersections from the Neptune Project are captured in the enclosed table. <table border="1"> <thead> <tr> <th>HOLEID</th> <th>Easting</th> <th>Northing</th> <th>RL</th> <th>EOH Depth (m)</th> <th>Type</th> <th>DIP</th> <th>Azimuth</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>WCD021</td> <td>261507.9</td> <td>6939288.2</td> <td>460.5</td> <td>1113.7</td> <td>DDH</td> <td>-85</td> <td>088</td> <td>Complete</td> </tr> </tbody> </table>	HOLEID	Easting	Northing	RL	EOH Depth (m)	Type	DIP	Azimuth	Comments	WCD021	261507.9	6939288.2	460.5	1113.7	DDH	-85	088	Complete
HOLEID	Easting	Northing	RL	EOH Depth (m)	Type	DIP	Azimuth	Comments												
WCD021	261507.9	6939288.2	460.5	1113.7	DDH	-85	088	Complete												
Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> Standard weighted averaging of drill hole intercepts were employed. No maximum or minimum grade truncations were used in the estimation. The reported assays have been length and bulk density weighted. A lower arbitrary 0.5% Ni cut-off is applied, with no top cut applied. High grade intercepts internal to broader zones of mineralisation are reported as included intervals. Metal equivalents have not been used 																		
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known'). 	<ul style="list-style-type: none"> Drill hole intersections may not be true widths 																		
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> Included within report 																		
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> All relevant assay results have been reported 																		
Other substantive exploration data	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	<ul style="list-style-type: none"> Included within report Geophysics Information on structure type, dip, dip direction alpha and beta angles, texture, shape, roughness and fill material is stored in the structural logs in the database. 																		
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	<ul style="list-style-type: none"> Preliminary plans are included within the report Future explorations programs may change depending on results and strategy 																		



JORC 2012 TABLE 1 – Western Gawler Joint Venture

Section 1: Sampling Techniques and Data

Criteria	JORC Code Explanation	Comment
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> Air-core (AC) and Reverse Circulation (RC) drilling is used for sampling. Each sample interval is split to approximately 3kg using a rig mounted rotary splitter. Each sample is sent for analysis to ALS Global laboratories in Perth, Western Australia. The sample is pulverised in the laboratory (total prep) to produce a sub sample for assaying. All sampling was conducted using WSA QAQC sampling protocols which are in accordance with industry best practice.
Drilling Techniques	<ul style="list-style-type: none"> Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> Exploration targets are tested using AC and RC drilling. Holes were typically drilled vertically. A truck-mounted air-core rig is used with a 3 inch diameter face sampling hammer drilling or Air-Core bit.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias 	<ul style="list-style-type: none"> Drilling recoveries are digitally logged, recorded and captured within the project database. Overall recoveries are >95% and there has been no significant loss of sample material due to ground or drilling issues. Each individual sample is visually checked for recovery, moisture and contamination. The style of expected mineralisation and the consistency of the mineralised intervals are expected to preclude any issue of sample bias due to material loss or gain.
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> Geological logging is recorded and validated in excel spreadsheets (Toughbook platform) Drill chips are logged for lithology, mineralogy, mineralisation, weathering, fabric, grain size, colour and other relevant features. Geotechnical logging was not completed due to the nature of drill method. All holes have been logged from the surface to the end of hole. Petrology is used to verify the field geological logging.
Sub-sampling techniques and sampling preparation	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> The drill samples were collected every metre on the drill rig using a rotary splitter. No composite samples are taken. Field QC procedures involve the use of certified reference material as assay standards, along with blanks, duplicates and barren washes. The insertion rate of these averaged 1:20, with an increased rate in mineralised zones. Field duplicates are conducted on approximately 1 in 25 drill intersections. The sample sizes are considered to be appropriate to correctly represent the geological model based on: the style of mineralisation, the thickness and consistency of the expected intersections, the sampling methodology and percent value assay ranges for the primary elements.
Quality of assay data laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g. 	<ul style="list-style-type: none"> All samples are processed by ALS Minerals (Australian Laboratory Services P/L) in Perth, Western Australia All drill samples are subjected to ICP-MS (ME-MS61) analysis using nitric, perchloric, hydrofluoric and hydrochloride acid digest. All samples are also assayed for PGE's using PGM-ICP23 Standards and blanks are routinely used to assess company QAQC (approx 1 standard for every 25-50 samples).

ACTIVITY REPORT

For the period ending 31 December 2018

WESTERN AREAS LTD



Criteria	JORC Code Explanation	Comment
	<i>standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	
Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> Primary data was collected using validated excel spreadsheets, on Toughbook computers. All data is validated by the supervising geologist, and sent to WSA Perth for further validation and integration into a Microsoft Access database.
Location of data points	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> Drill holes were located using hand held GPS. Elevation data is captured with hand held GPS, and cross referenced with local topographical maps (DMP produced), SRTM data and recently captured DTM models (where covered by the Aeromagnetic Surveys – Thomson Aviation). MGA94 Zone 53 grid coordinate system is used.
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> Drill holes are located and specifically planned according to target location and stratigraphic location. Samples are collected every metre down hole. Sample compositing has not yet been applied, but may do so depending on the assay information required.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	<ul style="list-style-type: none"> The majority of the drill holes are drilled vertically which may reduce range of lithologies or cross section of stratigraphy sampled in areas that are steeply dipping. Heritage and/or environmental constraints may prevent some ideal drilling solutions. No orientation based sampling bias has been observed in the data, intercepts are reported as down-hole lengths.
Sample Security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> All samples are captured and prepared for transport onsite under the supervision of WSA staff. All samples are collected in sealed task specific containers (Bulka bags – plastic pallets) and delivered from site to Perth and then the assay laboratory via WSA staff.
Audits and Reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> Adrian Black of Newexco Pty Ltd (a member of the AIG), an independent exploration company, has reviewed the data and sampling techniques employed by WSA.

JORC 2012 TABLE 1 – Western Gawler Joint Venture

Section 2: Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)

Criteria	JORC 2012 Explanation	Comment
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area. 	<ul style="list-style-type: none"> The Western Gawler Project comprises 6 exploration licenses covering some 4,448km², of which 5 are held 100% WSA. (EL 6087 (formerly EL 5077), EL6248 (formerly EL 5199), EL6249 (formerly EL5200), EL5688 and EL5939) A sixth license EL 5880 (formerly EL 4440) is operated under the Strandline Resources Ltd / Western Areas Ltd Farm-In and Joint Venture (JV) Agreement.
Exploration done by other parties.	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> The project area was originally explored by BHP Billiton as part of its extensive gold, titanium, Iron and nickel target generation work, and more recently by Gunson Resources Limited (Nickel), Equinox (Base Metals and Gold) and Iluka Resources Ltd (Mineral Sands). It is deemed that the previous exploration was of variable effectiveness. The South Australian Government has performed widely spaced stratigraphic diamond drilling along a number of traverses in the tenure The success rate of historical RC drilling is low, while the AC and Diamond drilling was effective. Gravity, Magneto Tellurics and Airborne Electro-magnetics have been used in selective locations within the project area. The historical geophysics is deemed to have been effective.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of 	<ul style="list-style-type: none"> The Western Gawler Project lies within the Fowler Domain of western South

ACTIVITY REPORT

For the period ending 31 December 2018

WESTERN AREAS LTD



Criteria	JORC 2012 Explanation	Comment																																				
	<p>mineralisation.</p>	<p>Australia. The Fowler Domain is a Mesoproterozoic orogenic belt comprised of medium to high metamorphic grade basement lithologies and younger felsic, mafic and ultramafic intrusives.</p> <ul style="list-style-type: none"> • Similarly aged terranes globally contain significant accumulations of nickel and copper sulphides. • Whilst not primary target types, the area may also be prospective for orogenic gold, IOCG and skarn related mineralisation. 																																				
Drill hole Information	<ul style="list-style-type: none"> • A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<table border="1"> <thead> <tr> <th>HOLEID</th> <th>Easting</th> <th>Northing</th> <th>RL</th> <th>EOH Depth (m)</th> <th>Type</th> <th>DIP</th> <th>Azimuth</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>18WGRC377</td> <td>217270</td> <td>6534900</td> <td>68</td> <td>256</td> <td>RC</td> <td>-60</td> <td>120</td> <td>Complete</td> </tr> <tr> <td>18WGRC370</td> <td>218510</td> <td>6526461</td> <td>64</td> <td>130</td> <td>RC</td> <td>-90</td> <td>0</td> <td>Complete</td> </tr> <tr> <td>18WGRC371</td> <td>218370</td> <td>6527760</td> <td>63</td> <td>142</td> <td>RC</td> <td>-90</td> <td>0</td> <td>Complete</td> </tr> </tbody> </table>	HOLEID	Easting	Northing	RL	EOH Depth (m)	Type	DIP	Azimuth	Comments	18WGRC377	217270	6534900	68	256	RC	-60	120	Complete	18WGRC370	218510	6526461	64	130	RC	-90	0	Complete	18WGRC371	218370	6527760	63	142	RC	-90	0	Complete
HOLEID	Easting	Northing	RL	EOH Depth (m)	Type	DIP	Azimuth	Comments																														
18WGRC377	217270	6534900	68	256	RC	-60	120	Complete																														
18WGRC370	218510	6526461	64	130	RC	-90	0	Complete																														
18WGRC371	218370	6527760	63	142	RC	-90	0	Complete																														
Data aggregation methods	<ul style="list-style-type: none"> • In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> • Where assays results have been reported, they represent a single sampling interval (1m). In this case, no compositing has been used. • No metal equivalents have been used. 																																				
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> • These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known'). 	<ul style="list-style-type: none"> • Not applicable 																																				
Diagrams	<ul style="list-style-type: none"> • Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> • Refer to Table for location coordinates relating to the reported elevated intervals. 																																				
Balanced reporting	<ul style="list-style-type: none"> • Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> • No significant material results to report. 																																				
Other substantive exploration data	<ul style="list-style-type: none"> • Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	<ul style="list-style-type: none"> • Multi-element analysis was conducted routinely on all samples for a base metal and PGM suite and potentially deleterious elements. 																																				
Further work	<ul style="list-style-type: none"> • The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	<ul style="list-style-type: none"> • Exploration within the Western Gawler Project is ongoing. • At this stage of the exploration program, the nature of the geological model is evolving. Details of further work and will be forthcoming as the project progresses. 																																				